Indonesia - Community-Based Health and Nutrition

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Overview

Identification

COUNTRY
Indonesia

EVALUATION TITLE
Community-Based Health and Nutrition

TRANSLATED TITLE
Proyek Kesehatan dan Gizi Berbasis Masyarakat untuk Mengurangi Stunting

EVALUATION TYPE
Independent Impact Evaluation

ID NUMBER
DDI-MCC-IDN-MPR-SCBHNRS-2016-v01

Version

VERSION DESCRIPTION
- v01: Edited, anonymous dataset for public distribution.

Overview

ABSTRACT
The evaluation of the Nutrition Project will address three key research questions, which focus on both impacts and implementation. (1) What is the impact of the Nutrition Project's package of supply and demand-side activities on key outcomes? (2) What is the impact of the Nutrition Project on key subgroups, such as those defined by socioeconomic status? (3) How were various components of the Nutrition Project implemented? We will also seek, to the extent possible, to provide evidence on which specific project activities in the package were most likely to have led to the measured impacts and how they did so.

To answer these questions, Mathematica will implement a mixed-methods evaluation, with the quantitative component using a random assignment design. This design enables us to rigorously answer the first two research questions related to project impacts by analyzing quantitative data on both short- and medium-term outcomes. The baseline quantitative data presented in this package was collected in late 2014 and early 2015, and endline data collection is expected in late 2017 or late 2018, depending on the progress of implementation.

We will complement this quantitative analysis with qualitative analysis, mainly related to implementation, in order to answer the third research question. We expect the implementation analysis to take place in late 2016 or early 2017.

EVALUATION METHODOLOGY
Randomization

UNITS OF ANALYSIS
Households, Individuals, Villages, Health Centers

KIND OF DATA
Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Indonesia		

Topic	Vocabulary	URI
Health		
Nutrition		
Impact evaluation		
Randomization		
Stunting		

KEYWORDS
Indonesia, Nutrition, Stunting, Generasi, Training, Micronutrients, Sanitation, RCT

Coverage

GEOGRAPHIC COVERAGE
South Sumatra, West Kalimantan, Central Kalimantan

UNIVERSE
Caregivers of children under 3 years of age and pregnant woman in her second or third trimester (household surveys), village heads (village head surveys), village facilitators (FD) or Generasi program volunteers (KPMD) (village facilitator/program volunteer surveys), village midwifes (midwife surveys), village health post volunteers (village health post surveys), and staff at sub-district health centers (health center surveys) in MCC determined eligible sub-districts of 22 districts of 3 provinces of Indonesia - South Sumatra, West Kalimantan, Central Kalimantan.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Mathematica Policy Research	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Mathematica Policy Research	MPR		Independent Evaluator

DATE OF METADATA PRODUCTION
2016-10-13

DDI DOCUMENT VERSION
Version 1.1 (October 2016): This version has been updated to include village and puskesmas-level surveys of the MCC Indonesia Community-based Health and Nutrition to Reduce Stunting Project.

DDI DOCUMENT ID
DDI-MCC-IDN-MPR-SCBHNRS-2016-v01

MCC Compact and Program

COMPACT OR THRESHOLD
Indonesia Compact

PROGRAM

The Community-Based Health and Nutrition to Reduce Stunting Project, or the Nutrition Project, is one of three projects in the MCC's 5 year $600 million Compact with Indonesia. The Nutrition Project seeks to improve a range of maternal and child health outcomes, particularly stunting, with the ultimate goal of reducing poverty. Project activites are anticipated to be implemented over four years, from 2014-2018.The activities are being implemented in 11 of Indonesia's 34 provinces, which were chosen because they have among the highest levels of undernutritoin, and high infant and under 5 mortality. The activities be divided into three major components: 1. The community project activity, which provides block grants and facilitation to villages for activities related to health and schooling 2. A set of supply-side activities primarily targeting health providers 3. A national communications campaign to promote increased awareness about stunting The community project activity is an updated version of the Program Nasional Pemberdayaan Masyarakat - Generasi Sehat dan Cerdas (or Generasi for short). Generasi provides facilitation and annual block grants to villages to be used for activities that could lead to improvements in 12 health and school indicators established by Generasi. The community project activity of the Nutrition Project introduces Generasi to three provinces that have not yet benefitted from the program (Generasi has already been introduced in the other 8 provinces targeted by the Nutrition Program). The activity also includes a revision to the Generasi indicators and higher requirements for the qualifications and training of Generasi village facilitators across all 11 provinces. The supply-side activities include training for health service providers, the provision of length-taking equipment, micronutrient distribution, training and socialization on sanitation, and a private sector response activity aimed to encourage the private sector to participate in programs focusing on improving child health. MCC will support the implementatio of these activities across the 11 provinces (499 sub-districts) where Generasi is also being implemented, such that each participating sub-district receives a package of demand and supply-side interventions. The third major component of the project is a national communications campaign to promote increased awareness about stunting. The main themes are expected to include best practices for breastfeeding, complementary feeding, micronutrient supplementation, and sanitation. The messages will also build on formative research on the role of all household members, including mothers and fathers, in improving child health and nutrition. Pregnant women are a primary target audience for the campaign, but messages will also be crafted for the larger community.

MCC SECTOR

Health (Health)

PROGRAM LOGIC

MCC anticipates that the Nutrition Project activities will lead to service providers' improved ability to prevent, diagnose, and treat undernutrition; improved feeding and sanitation practices in households; and greater community and government awareness around nutrition. These short-term outcomes, along with the direct provision of micronutrient supplements, will lead to improved nutrition among pregnant women and children, reducing the prevalence of stunting, wasting, and underweight.

PROGRAM PARTICIPANTS

The household surveys covered all household members with additional surveys administered to either a caregiver of a child between 0 and 35 months of age or a pregnant woman in her second or third trimester who are members of the household. The village midwife (bidan) survey was administered to one midwife working in each village. The village maternal and child health service post volunteer (kader posyandu) survey was administered to one to three volunteers working at village health posts in each village. The village head (kepala desa) survey was administered to the village head in each village. The village volunteer (kader desa) survey was administered to the program designated village volunteer in each village. The health center (puskesmas) surveys were administered at all sub-district health facilities in each sub-district included in the evaluation and included four modules, which were adminitsered to a knowledgable member of the staff, a bidan coordinator, a nutritionist, and a santitation officer (if available).

Sampling

Study Population

Caregivers of children under 3 years of age and pregnant woman in her second or third trimester (household surveys), village heads (village head surveys), village facilitators (FD) or Generasi program volunteers (KPMD) (village facilitator/program volunteer surveys), village midwifes (midwife surveys), village health post volunteers (village health post surveys), and staff at sub-district health centers (health center surveys) in MCC determined eligible sub-districts of 22 districts of 3 provinces of Indonesia - South Sumatra, West Kalimantan, Central Kalimantan.

Sampling Procedure

The survey sample is drawn from 760 villages in 190 sub-districts in 22 districts in 3 provinces in Indonesia. MCC selected the 3 provinces for the study because they were among the 10 provinces in the country with the highest stunting prevalence, had not already received the Generasi activity, and had a sufficient number of potentially eligible kecamatan for the study. MCC then selected 22 districts within the 3 provinces because they were considered to be high-need based on stunting rates, rates of health access and use, and rates of health care "supply readiness". MCC then selected 234 sub-districts within the 22 districts because they were participating in (or were expected to participate in) the government of Indonesia's PNPM Rural program.

Based on preliminary statistical power calculations, MCC determined that a sample size of 90 treatment and 90 control sub-districts would be sufficient to allow for the possibility of replacements, but Mathematica suggested utilizing all selected sub-districts to increase statistical power (replacements were not necessary). MCC randomly assigned 225 sub-districts (out of the 234 eligible) to a treatment group of 130 and control group of 95 and to select a representative sample of 95 of the treatment sub-districts for inclusion in the evaluation. An implicit stratification procedure ensured that this sample was balanced across the districts in the study. However although the random selection was valid, it resulted in varying probabilities of selection across sub-districts. Weighting adjustment should be used in analyses of the data to adjust for the combined probability of selection across all three stages using sub-district-level weights, so that the estimates can are valid and can be generalized to the full set of 234 eligible sub-districts.

To select households in the survey, the following sampling strategy was used. In each of the 190 survey sub-districts, four villages were randomly selected, and in each village, one sub-village was randomly selected. The field teams conducted a listing of households to identify all children 0-35 months of age and all pregnant women in their second or third trimester of pregnancy living in the sub-village. 25 households with caregivers and 10 households with eligible pregnant women in each sub-district were randomly selected from the listing for interview. Interviews were sequentially attempted for the households in the randomized interview lists until 16 eligible caregivers and 8 eligible pregnant women (and their households) were interviewed in each sub-district. The total household sample consists of 3040 caregivers of children under three and 1520 pregnant women in their second or third trimester in 4560 households.

In every sample village the village head was targeted for interview with the the village head survey. If the village head was unable to be interviewed, the village secretary or the chief of domestic affairs was interviewed in the village head's place. The total sample consists of 760 villages.

In every sample village with a village facilitator (FD) or program volunteer (KMPD), the village facilitator or a program volunteer was targetted for interview with the village facilitator/program volunteer survey. The total sample consists of 440 village facilitators/program volunteers in villages with a village facilitator or a program volunteer.

To select village midwives in the survey, the field teams conducted a listing of village midwives who operated in each village during interviews with village head or midwife coordinators or other puskesmas health officers. If more than one village midwife was assigned to a village, one of those village midwives was randomly chosen for interview. If no village midwife was assigned to a village, some other midwife who ran a practice in the village or who provides services to people in the village was targeted for interview. The total sample consists 665 midwives in villages whose residents receive midwife services.

To select village health post volunteers in the survey, the field teams first conducted a listing of all village health posts that provided services to residents of sample sub-villages during interviews with the village head. The field teams then selected one village health post that met this criteria for each village for the sample and conducted interviews with the head of the health post or the most active health post volunteer, as well as up to two additional volunteers. The total sample consists of health post volunteers in 732 villages with village health posts.

The sample of health centers included all main health centers operating in sample sub-districts. The health center surveys

included four modules. For the first module, the field teams interviewed several respondents in each health center in order to gather general information, including the health center head, adminstrative staff, and other personel. For the second module, the field teams interviewed a midwife coordinator at the health center or other staff knowledgable about the Mother and Child Health section and midwife monitoring in the sub-district. In the third module, the field teams interviewed a health center nutritionist or other staff responsible for nutrition-related activities at the health center, if available. In the fourth module, the field teams interviewed a health center sanitation officer or other staff responsible for activities related to promotion of sanitation at the health center, if available. The total sample consists of 252 health centers, including 242 with a nutritionist and 232 with a sanitation officer.

Response Rate

84.63% of the primary households targeted for interview from the lists were interviewed, which includes 84.11% of caregiver households and 85.89% of pregnant woman households. Primary households refers to the first 16 caregiver households and 8 pregnant women households randomly selected for interview and eligible for interview (i.e., had not moved away, died, or did not meet interview criteria). Village head interviews were conducted in 100% of villages. Village facilitators or program volunteers were interviewed in 82.27% of eligible villages. A village midwife was interviewed in 85.97% of villages whose residents receive midwife services. A health post interview was conducted in 100% of villages with access to a village health post. Interviews were conducted in 99.60% of health centers for the first module, 97.22% of health centers for the second module, 95.54% of health centers with a nutritionist for the third module, and 87.50% of health centers with a sanitation officer for the fourth module.

Weighting

Analysis of the Stata code that was used to implement the implicit stratification at each stage suggested that, although the random selection process was valid, it resulted in varying probabilities of selection across sub-districts. In order to adjust for the combined probability of selection across all three stages, sub-district-level weights were computed. This weighting adjustment is necessary for valid impact estimates and generalizing results to the full set of 234 eligible sub-districts.

Sample weights for the household level surveys were computed using the combination of inverse probabilities of selection of the village into the sample, selection of households into the sample, and of survey response for all households (hh_wt), caregiver households (cg_wt), and pregnant woman households (pw_wt). In addition, sample weights were computed to account for the process of random assignment into treatment and control groups. These weights were computed using a combination of the inverse probability sample weights (discussed before) and the probability of random assignment for all households (hh_wt_ra), caregiver households (cg_wt_ra), and pregnant woman households (pw_wt_ra).

Sample weights for the village level surveys were computed using the inverse probabilities of selection of the village into the sample (desa_wgt). In addition, sample weights were computed to account for the process of random assignment into treatment and control groups. These weights were computed using a combination of the inverse probability sample weights (discussed before) and the probability of random assignment for all villages (desa_wgt_ra).

Sample weights that account for the process of random assignment of health centers into treatment and control groups were computed the probability of random assignment of all health centers (weight_ra).

Questionnaires

Overview

Mathematica developed questionnaires for baseline data collection, and the data collection firm, SurveyMETER, then translated the questionnaires into Indonesian. Questions were taken from a variety of existing surveys, including the Demographic Health Survey (DHS), the Indonesian Family Life Survey (IFLS) and the previous PNPM-Generasi evaluation surveys, as well as newly developed for this evaluation. The household questionnaire includes three modules: a household module administered to all households, a pregnant women module only administered to pregnant women, and a caregiver module only administered to the primary caregiver(s) of children 0-35 months. The health center quetionnaire includes four modules: a health facility module adminitered to knowledgable staff members, a module administered to a midwife coordinator, a module administered to a nutritionist, and a module administered to a sanitation officer. Baseline data collection also included a village midwife questionnaire, a village maternal and child health service post volunteer questionnaire, a village head questionnaire, and a village program volunteer questoinnaire.

Data Collection

Data Collection Dates

Start	End	Cycle
2014-11-29	2015-03-12	Baseline

Data Collection Notes

Licenses to conduct the study were gathered at the province, district, and sub-district levels by 14 field officers from September 9, 2014 to November 10, 2014.

Piloting took place from September 23-26, 2014 in a non-sample district of West Kalimantan.

All pre-testing took place in a non-sample district of South Sumatra. The pre-test of the listing took place from October 27, 2014 to November 2, 2014, and the pre-test of the household surveys took place from November 4-11, 2014 with a team of 18 field staff.

A total of 84 interviewers, separated into 14 teams, were used in data collection for the household surveys. Data collection for all surveys took place over nearly 15 weeks between November 29, 2014 and March 12, 2015.

For anthropometry measurement, interviewers used devices with international standards such as stadiometers, infantometers, digital scales, Hb meters, as well as disposable equipment such as handscoons, thunder-lates (lancet), microcuvettes, menotrols, and calibration tools.

Interviews were conducted primarily in Indonesian, but local languages were also used in some cases.

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Data Collectors

Name	Abbreviation	Affiliation
SurveyMETER	SurveyMETER	

Supervision

Each interview team consisted of a supervisor, a data supervisor, three interviewers, and a health officer.

Health officers were responsible for collection of anthropometry data.

Data Processing

Data Editing

Data consistency was checked throughout the data collection process, including:
1) During interviews
2) During data entry
3) During post-interview re-visits by supervisors
4) During double entry of all anthropometry data
5) After data entry with audio recordings to check outliers and inconsistencies

Other Processing

Data entry process was CAPI.

Data Appraisal

No content available